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Module 3

Inspections During Construction

Overview of 2014 Construction GP


- 880-10 Purpose
 - Govern stormwater discharges from construction activities
 - ≥ 1 acre
 - ≤ 1 acre that is part of a larger common plan of development or sale that is ≥ 1 acre






Overview of 2014 Construction GP

- 880-20 Effective date
 - 7/1/14 - 6/30/19 (5 years)
 - All Construction GPs expire at the same time and all renewals occur on the same date



Overview of 2014 Construction GP

- 880-30 Authorization to discharge
 - A.4.a-b: Before permit coverage, operator needs:
 - ✓ Approved ESC plan
 - ✓ Approved SWM plan
 - ✓ Developed P2 plan
 - ✓ Complete and accurate registration statement*



Overview of 2014 Construction GP

- 880-30 Authorization to discharge
 - C: Authorization of stormwater discharges from specific support activities on-site or off-site
 - Concrete or asphalt batch plants
 - Equipment staging yards
 - Material storage areas
 - Excavated material disposal areas
 - Borrow areas




Control measures must be in SWPPP

Overview of 2014 Construction GP

- 880-50 General permit application
 - A.2(2) - Activities permitted under the 2009 permit have 60 days to update SWPPP to comply with 2014 Construction GP





Overview of 2014 Construction GP

- 880-70 General permit

General Permit No.: VAR10

Effective Date: July 1, 2014


Expiration Date: June 30, 2019

GENERAL VPDES PERMIT FOR DISCHARGES OF STORMWATER FROM CONSTRUCTION
ACTIVITIES

AUTHORIZATION TO DISCHARGE UNDER THE VIRGINIA STORMWATER MANAGEMENT
PROGRAM AND THE VIRGINIA STORMWATER MANAGEMENT ACT




All Construction GP requirements are the
same!




Overview of 2014 Construction GP

- 880-70 Part I – Discharge Authorization and Special Conditions
 - B.1 Limits on coverage – post-construction discharges
 - Post-construction stormwater discharges not covered under Construction GP



Overview of 2014 Construction GP

- 880-70 Part I – Discharge Authorization and Special Conditions
 - B.4 Requirements for discharges to impaired waterway or waterway with assigned TMDL
 - SWPPP must have name of waterway
 - Permanent or temporary stabilization applied within 7 days after final grade
 - Nutrients applied with manufacture's recommendations or approved nutrient management plan



Overview of 2014 Construction GP

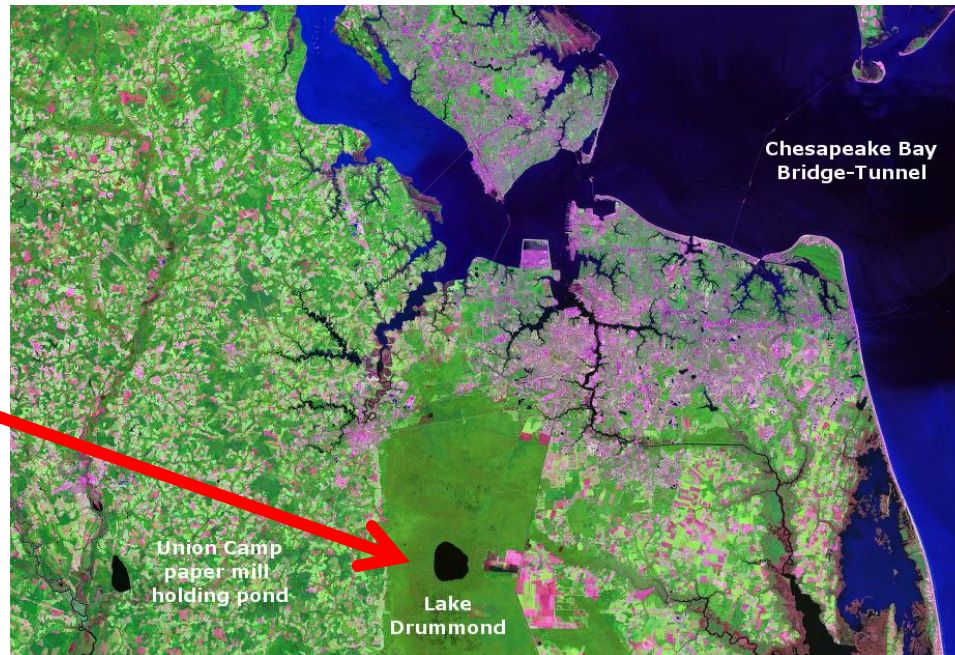
- Inspection requirements:
 - At least once every 4 business days; **OR**
 - At least once every 5 business days and no later than 48 hours following a measurable storm event

★ **This applies to inspections by operator's qualified personnel**

Overview of 2014 Construction GP

- Same requirements apply for discharges to exceptional waters

Lake
Drummond



Overview of 2014 Construction GP

- 880-70 Part I – Discharge Authorization and Special Conditions
 - D. Prohibition of nonstormwater discharges
 - ✗ 1. NO discharge of wastewater from washout of concrete



Overview of 2014 Construction GP

- ✗ 2. NO discharge of wastewater from the washout and cleanout of stucco, paint, form release oils, curing compounds, and other construction materials



Overview of 2014 Construction GP

- ✗ 3. NO discharge of fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance



Overview of 2014 Construction GP


- ✗ 4. NO discharge of oils, toxic substances, or hazardous substances from spills or other releases



Overview of 2014 Construction GP

- ✗ 5. NO discharge of soaps, solvents, or detergents used in equipment and vehicle washing






Overview of 2014 Construction GP

- 880-70 Part I – Discharge Authorization and Special Conditions
 - E. Authorized nonstormwater discharges
 - ✓ 1. Discharges from firefighting activities
 - ✓ 2. Fire hydrant flushings
 - ✓ 3. Waters used to wash vehicles or equipment where soaps, solvents, or detergents have not been used and the wash water has been filtered, settled, or similarly treated prior to discharge

Overview of 2014 Construction GP

- ✓ 4. Water used to control dust that has been filtered, settled, or similarly treated prior to discharge
- ✓ 5. Potable water sources, including uncontaminated waterline flushings
- ✓ 6. Routine external building wash down where soaps, solvents or detergents have not been used and the wash water has been filtered, settled, or similarly treated prior to discharge




Overview of 2014 Construction GP

- ✓ 7. Pavement wash waters ... where the wash water has been filtered, settled, or similarly treated prior to discharge
- ✓ 8. Uncontaminated air conditioning or compressor condensate
- ✓ 9. Uncontaminated ground water or spring water


Overview of 2014 Construction GP

- ✓ 10. Foundation or footing drains where flows are not contaminated with process materials such as solvents
- ✓ 11. Uncontaminated excavation dewatering, including dewatering of trenches and excavations that have been filtered, settled, or similarly treated prior to discharge
- ✓ 12. Landscape irrigation



Overview of 2014 Construction GP

- 880-70 Part I – Discharge Authorization and Special Conditions
 - F. Termination of general permit coverage
 - ★ a) Permanent control measures from SWPPP in place and functioning, final stabilization, long-term maintenance requirements

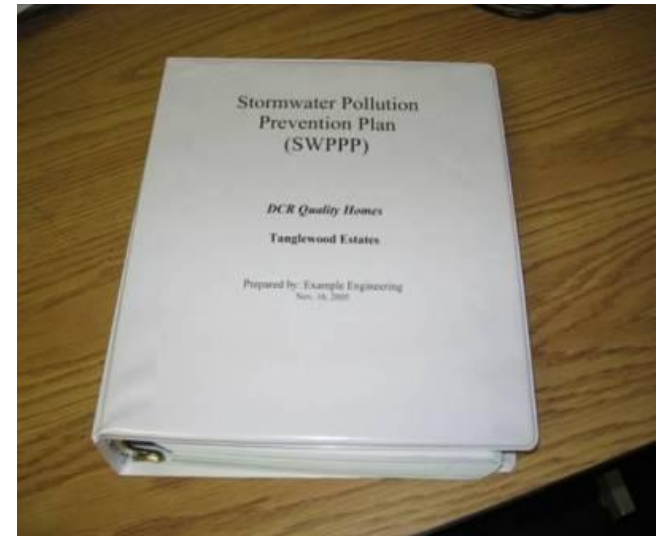


Overview of 2014 Construction GP

- ★ d) For residential construction only, temporary soil stabilization has been completed and the residence has been transferred to the homeowner

Overview of 2014 Construction GP

- 880-70 Part II – Stormwater Pollution Prevention Plan (SWPPP)
 - SWPPP must be developed before submission of registration statement



Overview of 2014 Construction GP

- 880-70 Part II – Stormwater Pollution Prevention Plan (SWPPP)
 - A. SWPPP contents
 - 1. General information
 - a. A signed copy of the registration statement


General Permit for Discharges of Stormwater from Construction Activities (VAR10)
Registration Statement

(Please Type or Print All Information)

Overview of 2014 Construction GP


- b. Copy of notice of coverage letter
- c. Copy of permit
- d. Narrative
- e. A legible site plan





Overview of 2014 Construction GP

- 880-70 Part II – Stormwater Pollution Prevention Plan (SWPPP)
 - A.2. Erosion and sediment control plan
 - a. ESC plan or “agreement in lieu of a plan”
 - b. Statement describing maintenance responsibilities required for the erosion and sediment controls being use



Overview of 2014 Construction GP

- 880-70 Part II – Stormwater Pollution Prevention Plan (SWPPP)
 - A.3. Stormwater management plan
 - a. New construction
 - ✓ Approved SWM plan

Overview of 2014 Construction GP

- 880-70 Part II – Stormwater Pollution Prevention Plan (SWPPP)
 - A.3. Stormwater management plan
 - b. Existing construction:
 - ✓ Must comply with Part II C and include supporting calculations
 - ✓ ESC measures on upland soils
 - ✓ All necessary permits must be obtained



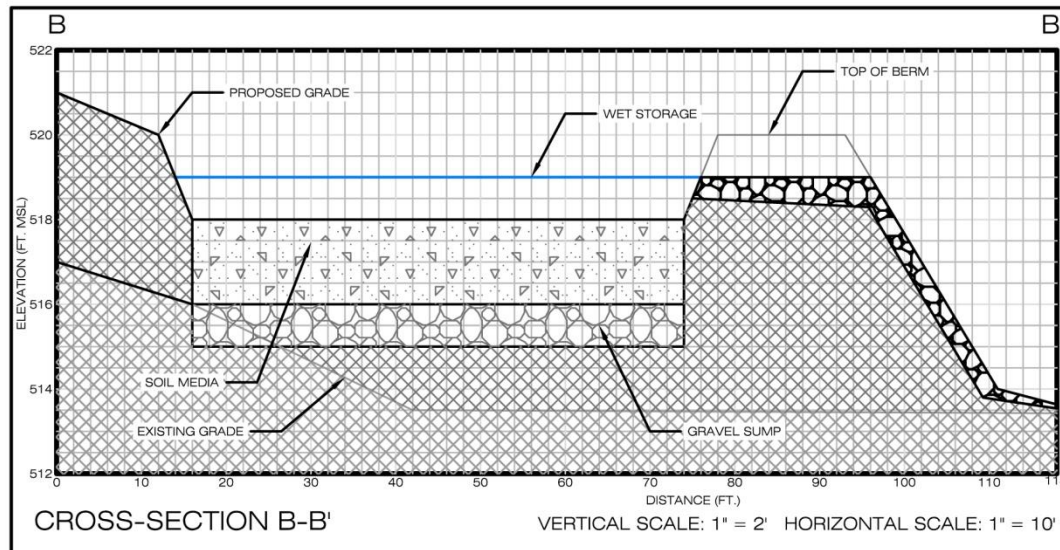
<p>SIZING CALCULATIONS, BIORETENTION LEVEL 1:</p> <p>POST DEVELOPMENT BMP TREATMENT VOLUME REQUIRED</p> <p>BMP Tv=8,231 C.F.</p> <p>SOIL MEDIA DEPTH = 24 IN</p> <p>GRAVEL SUMP = 12 IN</p> <p>WET STORAGE = 12 IN</p> <p>STORAGE DEPTH = DEPTH x VOID RATIO</p> <p>$= (24 \times 0.25) + (12 \times 0.4) + (12 \times 1) = 22.8 \text{ IN} = 1.9 \text{ FT}$</p> <p>BIORETENTION SURFACE AREA</p> <p>$= Tv / \text{STORAGE DEPTH} = 8,231 / 1.9 = 4,332 \text{ S.F.}$</p> <p>SURFACE AREA PROVIDED = 4,345 S.F.</p> <p>TREATMENT VOLUME PROVIDED = 8,255 C.F.</p>
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SPILLWAY CALCULATIONS:
Q2 = 5.8 CFS, Q10 = 12.2 CFS


SLOPE = 33%
DIMENSIONS: BOTTOM WIDTH = 8 FT
SIDE SLOPES = 2:1

$$\text{SHEAR STRESS} = R_h \times \text{SLOPE} \times S_w \text{ WATER} \\ = 0.28 \times 0.33 \times 62.4 = 5.77 \text{ LB/SF}$$

CLASS II RIPRAP FOR CHANNEL LINING



APRIL 2014									
<p align="center">SMALLTOWN, VIRGINIA DEPARTMENT OF PUBLIC WORKS</p>									
SITE PLANNING DIVISION									
EXERCISE 3									
TEL COMMERCIAL DEVELOPMENT DRAINAGE SCHEMATIC									
DEQ TRAINING CASE STUDY									
DESCRIPTION		BY	APPROVED	DATE	SCALE	DESIGNED BY:	K. PROBST		
APPROVED BY PUBLIC WORKS					1"=150'	DRAWN BY:	K. PROBST		
						CHECKED BY:	J. SMITH		



Overview of 2014 Construction GP

- 880-70 Part II – Stormwater Pollution Prevention Plan (SWPPP)
 - A.4. Pollution prevention plan
 - a. Identify potential pollutants and their location
 - b. Describe location of potential pollutant-generating activities
(Can reference the site plan)



Pollutant generating activities on site plan



Concrete wash



Dumpster



Portable toilets




Stock piles

Overview of 2014 Construction GP

- c. Identify all authorized nonstormwater discharges that will be commingled with stormwater discharges





Overview of 2014 Construction GP

d. Identify the person responsible for implementing the pollution prevention practice(s)


- If other than the person listed as the qualified personnel

Overview of 2014 Construction GP

e. Describe pollution prevention practices and procedures that will be implemented to:

- 1) Prevent and respond to leaks, spills, and other releases





Overview of 2014 Construction GP

- 2) Prevent the discharge of spilled and leaked fuels and chemicals from vehicle fueling and maintenance activities






6/03/2008 10:31 am

Overview of 2014 Construction GP


- 3) Prevent the discharge of soaps, solvents, detergents, and wash water from construction materials





Overview of 2014 Construction GP


- 4) Minimize the discharge of pollutants from vehicle and equipment washing, wheel wash water, and other types of washing



Overview of 2014 Construction GP

Vehicle washing good housekeeping tips:

- ✓ Wash offsite at an appropriate facility
- ✓ Locate away from storm drain inlets, drainage facilities and waterways
- ✓ Use filtration and settling devices to remove sediments
- ✓ Direct wash waters to basins, traps or other suitable BMPs



Overview of 2014 Construction GP

★ Remember, no discharge of
soaps, solvents or detergents!

Overview of 2014 Construction GP

- 5) Direct concrete wash water into a leak-proof container or leak-proof settling basin



Overview of 2014 Construction GP

- ✓ No overflows
- ✓ Hardened concrete waste removed and properly disposed of
- ✓ Liquid concrete waste removed and properly disposed of



Overview of 2014 Construction GP

- 6) Minimize the discharge of pollutants from storage, handling, and disposal of construction products, materials, and wastes



Overview of 2014 Construction GP


Construction Waste



Overview of 2014 Construction GP


- 7) Prevent the discharge of fuels, oils, and other petroleum products, hazardous or toxic wastes, and sanitary wastes






Overview of 2014 Construction GP

- 8) Address any other discharge from the potential pollutant-generating activities



Overview of 2014 Construction GP

- f. Describe procedures for providing pollution prevention awareness to personnel in order to comply with the conditions of the permit




Overview of 2014 Construction GP

- A.6. Qualified personnel:
 - Name, phone number, and qualifications of the qualified personnel conducting inspections must be in the SWPPP




Overview of 2014 Construction GP

- 880-70 Part II – Stormwater Pollution Prevention Plan (SWPPP)
 - B. SWPPP amendments, modifications, and updates
 - B1. Change in the design, construction, operation, or maintenance that has a significant effect on the discharge of pollutants to surface waters and not previously addressed in the SWPPP




Overview of 2014 Construction GP

- B2. Inspections find ineffective control measures
 - If VESCP or VSMP authority approval needed, revisions to SWPPP within 7 days of approval



Overview of 2014 Construction GP

- B3. SWPPP must identify contractor(s) that will implement and maintain control measures in SWPPP
 - Amended when new contractor assigned



Overview of 2014 Construction GP

- B4. SWPPP must be updated within 7 days following modification to its implementation

Overview of 2014 Construction GP

- B4. Modifications or updates to the SWPPP must include:
 - a) Record of dates for when:
 - Major grading activities occur
 - Construction activities temporarily or permanently stop
 - Stabilization measures are initiated

Overview of 2014 Construction GP

- b) Documentation of replaced or modified controls where inspections indicated controls used inappropriately or incorrectly and where modified



Overview of 2014 Construction GP

- c) Areas that have reached final stabilization and where no further SWPPP or inspection requirements apply



Overview of 2014 Construction GP

- d) All properties that are no longer under the legal control of the operator and the dates on which the operator no longer had legal control over each property



Overview of 2014 Construction GP


- e) Date of any prohibited discharges, the discharge volume released, and what actions were taken to minimize the impact of the release



When?


How much released?

What did you do about it?



Overview of 2014 Construction GP

- f) Measures taken to prevent the reoccurrence of any prohibited discharge
- g) Measures taken to address any evidence identified as a result of a “self” inspection




Overview of 2014 Construction GP

- B.5. Amendments, modifications, or updates to the SWPPP must be signed

Overview of 2014 Construction GP

- C. Public notification
 - Notice of coverage letter posted near main entrance





Overview of 2014 Construction GP

- D. SWPPP availability
 1. Operators with day-to-day operational control over SWPPP implementation must have a copy of the SWPPP available at a central location on-site


Overview of 2014 Construction GP

2. Operator must make SWPPP available upon request to:

- DEQ
- VSMP authority
- VESCP authority
- EPA
- Local government officials
- Operator of an MS4 receiving discharges from the construction activity

Overview of 2014 Construction GP


3. The operator must make the SWPPP available for public review in an electronic format or in hard copy
 - ✓ Access information posted at main entrance
 - ✓ If not electronic, SWPPP access may be arranged at a public location



Overview of 2014 Construction GP

- 880-70 Part II – Stormwater Pollution Prevention Plan (SWPPP)
 - F. SWPPP Inspections


The following inspection requirements are for the operator's qualified personnel



Overview of 2014 Construction GP


- 880-70 Part II – Stormwater Pollution Prevention Plan (SWPPP)
 - F. 2.SWPPP Inspections
 - At least once every 5 business days; **OR**
 - At least once every 10 business days and no later than 48 hours following a measurable storm event

Different requirements for discharges to impaired waterways, TMDL & exceptional



Overview of 2014 Construction GP

- When areas temporarily stabilized or ground frozen inspections can be once per month




Overview of 2014 Construction GP

- 880-70 Part II – Stormwater Pollution Prevention Plan (SWPPP)
 - F. 3. Inspection requirements

Qualified personnel inspection requirements


Overview of 2014 Construction GP

- 880-70 Part II – Stormwater Pollution Prevention Plan (SWPPP)
 - F. 4. Inspection report
 - Date and time of inspection, rainfall
 - Findings of inspection
 - Location of prohibited discharges, control measures needing maintenance, failed control measures



Overview of 2014 Construction GP

- 880-70 Part II – Stormwater Pollution Prevention Plan (SWPPP)
 - F. 4. Inspection report (continued)
 - Corrective actions required
 - Date and signature of qualified personnel and operator



Overview of 2014 Construction GP

- 880-70 Part III – Conditions applicable to all VPDES permits
 - K. Signatory requirements
 1. Who signs the registration statement
 2. Who can sign reports

Appendix 1 – Sample CGP Site Inspection Checklist

SAMPLE VSMP AUTHORITY CONSTRUCTION GENERAL PERMIT SITE INSPECTION CHECKLIST

(All section references bellow are to the Construction GP 9VAC25-880-70 effective 7/1/14)

Project Name: _____ Permit Number: _____
Project Address: _____ County/City: _____
Project Operator: _____ Operator Telephone: _____
Operator Address: _____ County/City: _____ ZIP: _____
Inspector Name: _____ Inspection Date: _____ Time: _____

		Yes	No	N/A	Recommended Corrective Action/ Notes
1	Copy of notice of coverage letter posted near main entrance: Part II(C)				
2	Information for public access to electronic format or hard copy of SWPPP posted near main entrance: Part II(D)3				
3	Copy of complete SWPPP available onsite for operators: Part II(A)				
3a	Signed copy of registration statement: Part II(A)1.a				
3b	Copy of permit: Part II(A)1.b				
3c	Copy of notice of coverage letter: Part II(A)1.c				
3d	Narrative description of the nature of construction activity: Part II(A)1.d				
3e	Legible site plan: Part II(A)1.e				
3f	Approved ESC plan, "agreement in lieu of a plan", or ESC plan developed in accordance with department approved annual standards and specifications: Part II(A)2				
3g	Approved SWM plan or SWM plan developed in accordance with department approved annual standards and specifications: Part II(A)3				